

Browsing through old TIMES files, I found a paper dated Oct. 13, 1929. It

Now, 20 years and you get caught in a rumble seat.

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'INTRUSIONS IN UNKNOWN AREAS'

Biologist Fears Disaster in Efforts to Manipulate Genes

BY GEORGE GETZE
Times Science Writer

Modern biology may lead society to disaster by promoting the mistaken popular belief that human genes can be manipulated to eliminate inherited physical and mental defects, a St. Louis biologist believes.

Dr. Barry Commoner, director of the Center for the Biology of Natural Systems at Washington University, said there is no scientific proof that science someday will be able to "engineer" human beings.

Despite this lack of proof, he said, many modern molecular biologists keep saying in public that someday science will be able to change genetic material so as to make all children turn out to be long-lived geniuses and perfect physical specimens.

Impossible Demands Seen

If people generally ever become thoroughly convinced such things are feasible the public will be led to make impossible demands on science, according to Dr. Commoner.

He said such demands could constitute a human catastrophe by leading to human experimentation and destruction of the ideal of the importance of the individual.

Dr. Commoner was the principal speaker last week at the opening session of the convention of the National Assn. of Biology Teachers at the Anaheim Convention Center.

He said in a press conference that the recent flurry of heart transplantations is an example of what he fears for the future—what he called "intrusions into unknown areas, undertaken before the consequences can be known."

Willful Exaggeration Seen

The basis of Dr. Commoner's challenge to modern biology is his belief that the role of DNA (deoxyribonucleic acid) in the mechanics of inheritance has been persistently and even wilfully exaggerated by eminent biologists.

It is claimed that DNA is the sole determinant of inheritance and the sole means by which inherited characteristics are transmitted from parents to offsprings.

"There is a widespread conviction that the fundamental, unique property of life—self-duplication—has been traced to a single chemical

substance, DNA," Dr. Commoner said.

"The idea has been enshrined in textbooks, and is the basis of the biologists' claim that they soon will be able to 'intervene in the ancient designs of nature,'" he said.

This grandiose claim is not warranted by the evidence, according to Commoner. He said belief in it, however, could thrust society into a "futile and catastrophically dangerous attempt to alter human life."

Commoner said DNA does have a special and essential role to play in inheritance, but he disputes the "central dogma" of the molecular biologists that its role is the only one.

The special part it plays is due to its rarity or uniqueness—what biologists call its lack of "redundancy."

That is, DNA's role is the key one because it is different from most other molecules in cells and because there are relatively so few DNA molecules.

"A cell usually contains only one or two replicas of a given DNA molecule, but each of its specific proteins is present in thousands of replicas," Commoner said.

Expressed in Inheritance

"If a newcomer DNA molecule is introduced into the cells it easily competes with the native molecules and is therefore expressed in inheritance," he said.

That's why DNA molecules bring about genetic changes while protein molecules do not, even though, according to Dr. Commoner, they carry genetic information, too.

He said DNA is uniquely capable of introducing genetic information into a new cell, not because DNA molecules are the only ones that possess information, but because being so few, their presence is felt more.

Commoner said molecular biologists persist in exaggerating the role of DNA because they want to be able to manipulate heredity.

"They have a yearning grasp for power over life," he said.

Another motive may be a desire on the part of the biologists to outdo the nuclear physicists who have achieved such eminence in 20th century science, Dr. Commoner said.

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